

East Side Railroad Tunnel
Benefit Street to Seekonk River
Providence
Providence County
Rhode Island

HAER No. RI-29

HAER
RI,
4-PROV,
184-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

East Side Railroad Tunnel

HAER No. RI-29

HAER
RI
4-PROV,
184-

Location: The East Side Viaduct joins the Union Station Viaduct at the Woonasquatucket River, across Promenade Street, Moshassuck River and Canal Street to the west portal of the tunnel between Main and Benefit Streets. The tunnel extends to the Seekonk River, where it joins with the Scherzer rolling lift bridge over that river, Providence, Rhode Island.

Date of Construction: 1908-1909

Present Owner: Providence & Worcester Railroad

Present Use: Unused

Significance: The tunnel and viaduct connected all rail traffic from Fall River, Massachusetts, and the eastern shore of the Narragansett Bay with the main shoreline route of the New York, New Haven & Hartford Railroad.

The East Side Tunnel viaduct is the eastern end of the Union Station Viaduct.

Railroad service was extended in 1908 to the east side by the completion of the East Side Railroad Tunnel. In 1903, the New York, New Haven & Hartford Railroad adopted the tunnel plan, under consideration for thirty years, in which all rail traffic from Fall River, Massachusetts, and from the eastern shore of the Narragansett Bay would be brought directly to Union Station, without the time-consuming transfer at Fox Point.

The Providence Station Viaduct was extended in 1909 under the direction of Chief Engineer Edward Gagel of the New York, New Haven & Hartford Railroad to connect the station with the east portal of the East Side Tunnel, passing over two rivers and three streets. Designed to carry from five to seven tracks, the extension was approximately one thousand and two hundred feet long and from fifty to seventy-five feet wide at about twenty feet above street level. It has a solid steel and concrete floor with long transverse and oblique plate girders up to one hundred feet long, supported on vertical steel columns from ten to thirty feet apart in straight and curved row.

Construction began in May 1906 from the east approach after acquiring title or easements from the various properties traversed by the line. Where the minimum depth from the surface to top of tunnel was less than thirty feet, title in fee was acquired to avoid possible future complications. The total cost of all real estate acquired by the railroad in Providence was the

equivalent of one half of all construction costs of the work from the Union Station to the west harbor line of the Seekonk River. One of the most difficult real estate transactions was the acquisition of the Arsenal Building property on the west side of Benefit Street, directly on the line of the tunnel. This was purchased and the old stone building was moved to its present location further north on Benefit Street. The earth removed during construction of the tunnel was used to fill the approach of the Seekonk River Bridge.

The tunnel alignment is tangential except for a short section at the west portal where the axis of the tunnel is on an eight-degree angle. The west tunnel portal is between North Main and Benefit Streets. Passenger service on this branch was discontinued in 1937; since then the tunnel has been used only for freight traffic (Cady 957, 201 ff). The catenary pole that supported the electrical wires were removed when electrical service was abandoned in 1938. The viaduct over Canal Street was demolished in 1982 as the first phase in the realignment of tracks in the Northeast Corridor Improvement Project.